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SPELLING.

Not every good speller can write an accurate letter. The proper collocation of the proper letters of words, constitutes, by no means, all that is required in the accurate expression of these words. In our own spelling exercises we have, of late, endeavored, with great profit, we think, to incorporate all that can be done with the pen to give to the words and signs of language an accurate and scholar-like expression. It is not in simple spelling, perhaps, that our men of business make the most noticeable mistakes. We have in our kitchen an excellent stove, cast and constructed in workman-like manner, and we do not hesitate to recommend it to our lady friends, whom a stern sense of duty in other spheres, has called to leave our professional ranks. But the name and title of our stove, written in ineffaceable letters of iron on the hearth, afford a good illustration of the fact that simple spelling does not constitute accurate expression. This inscription, with a sufficient change of words and letters to favor the feelings of the man who has helped us to so many good meals, and, now, to so good an illustration of our subject, reads as follows:

Adams & Jefferson, No 2.
made by,
D & N F Co.
Boston Mass.
Pat,d May, 29 1855

This inscription, which is all cast in capitals, and is also accurately spelled, contains, in punctuation, at least ten obvious mistakes. Let any teacher write upon the blackboard the following letter, and require his pupils to reproduce it, in approved style, and accurately, and his experience will be different from our own if the result is flattering either to pupil or teacher.

boston aug 13 1862 *a d smith jr esq dear sir yours of the* 6*th inst has been received please send by hill & cos express* 10 *doz lemons* 20 *lbs sugar and* 1 *lb tea lieut geo c jones of co b* 5*th reg was not as reported killed at culpepper va i am as ever yrs truly c t howe*

Our own course, in regard to what we call spelling exercises, is to order to be written upon the blackboard, the words, phrases, etc., which will be the subject of the next exercise, in order to afford an ample time for a thorough investigation, or to take some other means of securing study.

We give below several examples of the character of questions which we put to our pupils, the exercises being always written, and the number of mistakes recorded by the pupils who have in charge the correction of the lists. In giving out words to be accented or otherwise marked, the teacher will find various methods to avoid answering the question in the very act of pronouncing the words. Two or three pronunciations may be given, or the pupil may be warned that the teacher may as often pronounce incorrectly as correctly.

1. Spell and accent the noun *ally*.
2. Spell and define *Sibyl*.
3. Spell *machine*, marking the vowels and ch according to Worcester's notation of sounds.
4. Write accurately, *Worcester, Mass., May* 1*st*, 1862.
5. Write accurately the possessive plural of *loaf*.
6. Spell and define *esprit de corps*.
7. Write accurately and define, in Latin and English, LL. D.
8. Write accurately, *He is kind, wise, and good.*

9. Write accurately, *Up, boys, and at 'em*

10. Write accurately, *I don't say so.*

11. *Langour* (gor? or gwor?)

12. Spell, define, and accent *pomegranate,* and give the notation of *o* and the first *e.*

13. Spell and accent *accessary.*

14. Write, with the proper symbols, 4 *drams* 6 *grains.*

15. Spell, define, and accent *Fahrenheit,* and give the notation of the last two vowels.

16. Spell and accent *Rensselaer.*

17. Spell and define *Moloch.*

18. Spell and accent *acclimate.*

19. Spell and accent *New Orleans.*

20. Spell and define *ex tempore,* giving the number of syllables in the latter word.

HINTS IN REGARD TO EXTRACTING ROOTS.

The square of units is units; of tens, hundreds; of hundreds, tens of thousands; of thousands, millions, etc. The square root, therefore, of units is units; of hundreds, tens; of tens of thousands, hundreds; of millions, thousands, etc. But the square roots of tens, thousands, hundreds of thousands, etc., cannot be directly obtained; for a number of no denomination, multiplied by itself, will produce tens, or thousands, etc.; and, therefore, in seeking the roots of such denominations they must first be reduced to denominations whose roots can be directly obtained. Thus, in obtaining the square root of 4000 or of .4, the 4 thousands must be (mentally) reduced to 40 hundreds, and .4 to .40, etc. The proper answer, then, to the question, *How many figures will the square root of any number contain?* is, *As many as there are denominations in the number (after reduction, as above,) whose root can be directly obtained.* Thus the square root of 6.4 must contain, at least, two figures; for, after the reduction of .4 to .40, it contains two denominations, viz: units and hundredths, whose roots can be directly obtained.

Our own experience in examining pupils in arithmetic, which is somewhat extensive, shows that if, for example, the square root of 6.4 is required, the answer given, perhaps, in a majority of cases, will be .8, or something equally as erroneous. Such errors, it would seem, might easily be avoided by rejecting all arbitrary modes of "pointing off into periods," and by insisting upon a logical inspection of the number whose root is to be obtained, and a careful reduction of certain denominations, as suggested above, before allowing the pupil to attempt the extraction of the root.

Similar remarks might be made in regard to previous inspection in extracting cube roots. All experienced teachers must have observed how readily their pupils forget the methods of extracting roots. All arbitrary rules, especially if they are prolix and complicated, readily pass out of most minds, whilst a concise rule, expressing in its terms, some simple principle, lingers through life in the memory. For example, how soon would a rule of Greek syntax, like the following, fade from the pupil's mind: "*Verbs signifying to hear, to admire, to smell, to desire, to consider, to taste, to forget,* etc., etc., etc., govern the genitive." But the principle of this same rule announced in the simple formula, "*Words of sensation, mental state, or action, govern the genitive,*" does not quickly forsake the mind. It is no barren list of words, but its language is linked to a principle, and is thus fastened in the memory.

But to return to our subject. Cannot some simple formula for the composition of the square of a number, be lodged in the pupil's mind, which itself suggests its analysis, and ever after affords him the means of making his own rules for extracting roots, when all arbitrary rules shall have escaped his memory? What, then, are the elements of the square of a number? Taking, as an example, 735, we find its square, by multiplying, as follows:

$$\begin{array}{l} (73\text{ tens})+(5\text{ units}) \\ (73\text{ tens})+(5\text{ units}) \\ \hline (73\text{ tens})^2+[2(73\text{ tens})+(5\text{ units})]\times(5\text{ units}) \end{array}$$

Now as the square of any number may assume a form precisely similar to that of 735, it follows that *the square of any number consists of two parts, the first of which is the square of the tens, the second is the product of two factors, one of which is twice the tens plus the units, and the other is the units.*

Were we engaged in teaching "square root" to a class, we would insist that the method of deriving the square above, and the formula which interprets it, should be explained again and again and again, and most thoroughly comprehended and fixed in the mind. After this, the process of finding the root is very simple and direct; for if the square of a number consists of two parts, and one of these parts is the square of the tens, it follows that when the square of the tens is subtracted from the square of the number, the second part alone remains, which, as the formula asserts, is the product of two factors, one of which is (mainly) twice the tens. If, therefore, the second part be divided by twice the tens, the other factor, which is the units, is approximately obtained.

Having, therefore, hinted at the method of reasoning, so far as finding the trial divisor, we leave the process incomplete, suggesting that a precisely similar mode of reasoning, and a similar formula, may be employed in finding cube roots. For the cube of 735 equals, as found by multiplication,

$$\overline{(73\text{ tens})^3}+[3(73\text{ tens})^2+3(73\text{ tens})\times(5\text{ units})+(5\text{ units})^2]\times(5\text{ units})$$

and our formula would read *the cube of any number consists of two parts, the first of which is the cube of the tens, and the second is the product of two factors, one of which is three times the square of the tens plus three times the product of the tens and units plus the square of the units, and the other is the units.* Applying the principle of the formula to the extraction of the cube root, the process is similar and analagous to that of extracting the square root.

The formulæ above apply only to finding integral roots of two figures. When the root contains more than two figures the pupil's mind should not be perplexed with new formulæ. Let it be required, for example, to find the square root of 540225. Having first found, by the above principles, that the square root of 5402 is 73 units, (approximately,) we easily infer that the square root of 5402 hundreds is 73 tens (approximately), and, having thus found the tens in the root, the formula now applies directly to finding the root of 540225. These two processes, thus used for explanation, would, of course, in practice, assume the usual form of one process.

In applying the formula to decimal fractions, these fractions must, during the process, and after reduction, as above, be treated

as units, and the true answer inferred. We have suggested no material change in the usual processes of extracting roots, but have only hinted at certain methods of reasoning by which the pupil might more easily comprehend and retain the rationale of these processes.

In general, let us remark that instructors would find it profitable, in teaching the various processes of the more complicated departments of arithmetic, to insist upon a more thorough knowledge of the composition of the numbers upon which operations are to be performed, before allowing the process to be commenced. If, for example, in problems involving interest, the amount, principal, and rate, are given, and the time required, the pupil may easily make his own rule, when, by an analysis of the amount, he perceives that every amount is the product of three factors, viz ; the principal, the time, and the amount of one dollar for one year, two of which factors are, in substance, given.

Our schools would be profited if much of the time now spent in "trying to get out" tough problems, were devoted to a logical analysis of the elements involved.

EXHIBITIONS.

THE objections most commonly urged against exhibitions are that they withdraw the attention of pupils from more valuable occupations ; or, in other words, are a waste of time, and that they are not true exponents of the results of the proper labors of the school, but almost entirely foreign from these labors. But perhaps the most serious objection is one which we have never seen in print. It is this. These exhibitions are very largely of a comical character. The children who take part in them assume, to a great extent, the parts of boorish and clownish personages, and, in general, are required to act the buffoon, and to indulge in low wit, if not in language of doubtful purity and morality. Modest and timid girls are induced to throw off that coy and bashful demeanor which is the charm of their childhood, and which they will naturally lose quite soon enough, and become pert and impudent, whilst

playing their false and unnatural parts. The time of exhibition comes. The pupils are applauded and flattered, as they never have been before. The coy and bashful little misses have now learned the art of attracting attention and gaining applause. They must, hereafter, be pert and saucy, false and witty. They must say smart things, and do something bold and dashing, or they wont bring down the house. The boys must act the clown for weeks, and repeat again and again the almost profane, and ungrammatical, and vulgar phrases, which, on the day of exhibition, so delighted the audience.

A lady of our acquaintance, (not a teacher,) whose judgment we much respect, has frequently referred us to her own observation upon the deleterious effects of these comic exhibitions on the conduct and manners of those who participate in them, in inducing them to act boorish parts in society, and, by constant repetition of low wit and cant phrases, to render themselves disagreeable to refined people, who admire, above all things, in the manners of children, simplicity and modesty of behavior. We have children ourselves, who, we believe, are as yet sufficiently simple and green, and we beg of their teachers, if they must be "brought on" in some comic dialogue, to show us all the mercy they can afford, to give them but some humble part, and, if possible, to bring them on in some "dumb show."

We are fully aware how popular exhibitions are, and how much flattered parents are, to see their own children put forward to meet the gaze and secure the applause of others. The evils referred to are chargeable not alone to teachers. All who look on and applaud, must share the blame.

The view of the subject here presented demands, we believe, the serious consideration of the friends of education.

CLASSIFICATION.

The following anecdote very happily illustrates the importance of the classification of isolated facts, as an aid to the memory in retaining them:

A lady was complimenting a clergyman on the fact that she

could always recollect and recite more of the matter of his sermons than those of any other minister. The reverend gentleman thought he could explain the cause. "I happen," said he, "to make a point of classifying my topics — it is a hobby of mine to do so; and therefore I never compose a sermon without first settling the relationship and order of my arguments and illustrations. Suppose, madam, that your servant was starting for town, and you were obliged hastily to instruct her about a few domestic purchases, not having time to write down the items; and suppose you said, 'Be sure you bring some tea, also some soap, and coffee too; by-the-by, some powder blue; and do n't forget a few light cakes, and a little starch, and some sugar; and now I think of it, a little soda' — you would not be surprised if her memory failed with regard to one or two of the articles. But if your commission ran thus: "Now, Mary, to-morrow we are going to have some friends to tea, therefore bring a supply of tea, and coffee, and sugar, and a few light cakes; and the next day, you know, is washing day, so that we shall want soap, and starch, and soda, and powder blue;' and it is most likely she would retain your order as easily as you retain my sermons."

IS THE FRENCH OR THE ENGLISH RATIO THE MORE NATURAL AND CONVENIENT?

In some recent numbers of the *Teacher* it was shown that the change in the form of a ratio, from the common to the fractional form, is not properly designated the French method, or the English method, according as the antecedent or the consequent is made the denominator of the fraction.

These were convenient terms, at least, and more agreeable than the chosen names of the writer, "the heels-over-head and the head-over-heels methods." His other names, "the consequent-antecedent and the antecedent-consequent methods," though in better taste, are objectionable, inasmuch as they are long, and not sufficiently definite. But we may, perhaps, be permitted to continue the use of the old terms until others are agreed upon, as they have

the advantage of being generally understood. By whatever names the two methods may be called, we shall be still at liberty to adopt that method which shall seem most natural and convenient.

Which method is the most natural and convenient, is a much more important question. If this were satisfactorily determined, we might look for greater uniformity, and perhaps consistency, in practice.

It is not disputed that either method correctly expresses the relation between the two quantities; as to say that the first of two quantities is three times the second, is no more or less plain than to say the second is one-third the first. But it is desirable to have some system that all may agree upon and adhere to; and especially is it desirable that when an author has chosen his method, he himself should adhere to it.

If the two methods are equally true, and every one is free to choose his own method; if, also, one of the methods is convenient and natural, and can be intelligently applied on all occasions; and though the other method may, in some unimportant respects, seem preferable, yet, if in its application we are obliged to resort to abstract and arbitrary rules, which the learner must take upon trust; and if, in treating some subjects, we are constrained to employ the other method — one would suppose there could be no hesitation, on the part of an independent mind, which method to prefer; no doubting inquiry who introduced this or that method, or which the majority preferred.

In reference to the English method, it is said that the readings of the two forms agree in the *order* of the terms: thus, the ratio of two to four equals two-fourths, ($2:4=\frac{2}{4}$,) the 2 being first read in each case. But this apparent advantage will be found merely superficial; for even if uniformity in the order of reading the terms in both forms be deemed important, that may be secured by the French method: thus, $2:4=\frac{4}{2}$ may be read the ratio of two to four equals the quotient of two in four, the two being first read in each case. A fraction may be taken in several points of view: thus, $\frac{4}{2}$ may be considered and read as four halves of 1, one-half of 4, four such parts that two like them make a unit, 4 divided by 2, two contained in 4, and the ratio of 2 to 4. In some of these readings the numerator is first read, and in others the denominator; and it

may perhaps be said that the latter are as nearly allied to ratio as the former. Certainly, in considering a fraction as a ratio, there is no difficulty in any one taking that view of the fraction that conforms to his view of the ratio, whether he prefer the French or the English method.

There is also a fancied identity of the sign of ratio with the sign of division. The arrangement of the English method favors this consideration. But the sign between the terms of a ratio is the sign of a ratio, and has no more *necessary* connection with the sign of division than the double sign (::) between the two ratios of a proportion has with double division.

If we consider the English method in its practical application in proportion we find the rules necessarily empyrical: thus, "If more requires more, or less requires less," (I quote from memory,) place the terms so and so; "but if more requires less, or less requires more," place the terms some other way. Also, "If the answer must be larger than the third term, place the first two terms so and so; otherwise place them differently." These rules leave out of view the fundamental principles of proportion, the two ratios must be equal, the product of the means is equal to the product of the extremes, and, especially, the first ratio should express what part of the third term the fourth term or answer must be.

Again, the English method is still more awkward in its application to geometrical progression. Indeed, it is so inconvenient of application that it is abandoned, and the French method adopted in all the works that I have examined, including those of Sherwin, Greenleaf, Perkins, D. Adams, P. E. Chace, Tracy, Burnham, Leach and Swan, Eaton, and many others that need not be named. These all would say 2:4 is $\frac{2}{4}$ or $\frac{1}{2}$; they would also say that in the geometrical progression 2, 4, 8, 16, 32, etc., the ratio is 2! See Sherwin's Algebra, pp. 219 and 236: "$\frac{3}{5}$ is the ratio of 3 to 5." "The quotient arising from the division of any term by that which *precedes* it, is called the common ratio." "Thus, in the progression 2, 4, 8, 16, 32, the ratio is 2." Parallel quotations might be adduced from the other authors.

The dodge in the July number of the *Teacher*, that in a series the ratio is to be taken backwards, is a little too short to avail. It shows, however, what singular shifts can be made to defend an in-

defensible usage. Thus, in the series 2, 4, 8, 16, 32, etc., 2 is to 4 as 4 is to 8 as 8 is to 16, etc., is not the true reading; but 4 is to 2 as 8 is to 4 as 16 is to 8! What is there so "philosophical" in this spring-halt manner of reading a series? Can it change the ratios at all by taking any two of them out of the series, and equating them in a common proportion, thus 2:4=4:8? The truth is, the French ratio is employed here, and it may as well be acknowledged. Its application is straight-forward and natural; and there is no other occasion for its use where its application is not perfectly easy and natural.

If 3 yards cost $10, what would be the cost of 7 yards? The answer is, 7 yards would cost $\frac{7}{3}$ of $10, which, stated in proportion by the French method, gives $3:7=10:\frac{10\times7}{3}=\$23.33\frac{1}{3}$. Equally natural is the application of the inverse ratio. Thus, if 3 men can do a job of work in 10 hours, how many hours would 7 men require? The answer is, 7 men would require $\frac{3}{7}$ of 10 hours, which gives $7:3=10:\frac{10\times3}{7}=4\frac{2}{7}$ hours. So in all cases, if the answer be stated in the true fractional ratio as above, and written in the common form by the French method, the proportion will be correctly stated.

We speak of an increasing series, progression, or proportion, and our meaning is understood. We mean a series of quantities, in which the successive terms are larger as the series advances, and the common ratio is greater than unity. Why may we not speak of an increasing ratio when the series consists of only two terms? Obviously we may, with the strictest propriety, and we should be understood to mean a ratio in which the second term is larger than the first. Consequently 2:4 is an increasing ratio, greater than unity, and requiring the French method of expression in the fractional form. The terms "increasing ratio" and "decreasing ratio" seem to me far more intelligible than those we sometimes see, "ratio of less inequality," "ratio of greater inequality."

What if a false method has given currency to "many prevailing expressions"? Is that a reason that we should adhere to a false system? Must we pronounce such expressions "philosophical," because they have attained some currency? Is it not just as easy and natural to say the ratio of the diameter to the circumference is 3.1416, as to say the ratio of the circumference to the diameter is

3.1416? In comparing two things, is it not just as easy and natural to name first as last that which is to be considered the standard in the comparison? And are not the considerations of convenience, uniformity, and consistency, worthy of our acceptance? J. S. R.

RECREATIONS FOR SUMMER VACATION.

It is well understood that, at the annual examination for admission to Harvard College, to be admitted unconditionally is the exception, to be "conditioned" is the rule. This year, we learn, about five-sixths of the candidates were "conditioned." These "conditioned" candidates are required, during summer vacation, to "make up the conditions," and to bring from their regular teacher, or some other approved person, a certificate of having properly performed the task required.

To "fit" for Harvard, the excellent Boston Latin School assigns a course of six years' study, in which all the sciences, and, indeed, almost all studies, except Greek and Latin, and a moderate amount of mathematics, are mainly excluded. If now, in this school, in which the highest talent, and every external facility which a generous public can afford, are found, six years, devoted directly to the specific object of fitting boys for Harvard, are none too many, what shall be said of the task of the teachers of the other High Schools in the State, in which the classical course is embarrassed by its connection with the English, in which both sexes recite together, and the preparatory course generally extends only through four years? In such schools, we judge, only about one-half the Greek required at Harvard is usually read, not to mention deficiencies in other branches; and the candidates presented by them are allowed the recreation during the summer vacation, when their wearied minds so much need repose, of reading, sometimes, four books of Xenophon, one of Homer, perhaps, six of Virgil, and an indefinite amount of ancient geography, Greek and Latin composi-

tion, geometry, etc. Their teachers, too, are allowed the privilege, if they choose to avail themselves of it, of foregoing their contemplated excursions, and devoting their time to aiding their "conditioned" pupils in their irksome task.

We believe these conditions and requirements unjust towards teachers, who, having faithfully instructed their pupils for four years, a time confessedly too short to "fit" for Harvard, are entitled to be free from further demands. What right, we ask, has the faculty of a Medical College to say to five-sixths of those graduates of Harvard, who may apply to the college for admission, "You can only be admitted when you bring from some college professor a certificate that, during the summer vacation, under his supervision, you have faithfully 'made up' certain large amounts of Latin, etc., not embraced in your college course at Harvard." Any professor would justly disregard such a demand and refuse such a certificate. Yet almost precisely such demands are made, and such certificates required, by the faculty of Harvard, of the teachers next below them.

We do not complain here that the standard of Harvard is too high. It is not our province to do so. If the accidents and accents of two dead languages demand even half the full space of human life, let the sacrifice be generously made in so noble a cause; but we do object to the mode in which these "conditions" are imposed. We say *accept* or *reject*, and let the teacher rest when his work is once faithfully done, and he has instructed his candidates as long as the community will sanction, or justice to his other pupils will allow. The college must settle with the community, and not with the teacher. We are ready to join our fellow teachers in adopting a uniform certificate of recommendation for admission to Harvard, for those who insist that they must enter that college, stating that the bearer has completed the classical course of study prescribed in our respective schools, that this course does not meet the requirements of Harvard College, but it is as long and extensive as the community will sanction. Having given this certificate of non-qualification, we should feel at liberty to decline to give further instruction, or to sign further certificates. By refusing to give certificates of qualification, the community would soon cease to expect us to do, in four years, the work of six.

ASCENT OF MONTE ROSA IN SWITZERLAND, SEPTEMBER 4th, 1861.

BY REV. KINSLEY TWINING.

You are wondering, I presume, how we, who were lately on the other side of the mountains, have come into Italy. Our last was from Visp, where we were waiting for the cooler hours of the afternoon, and expecting then to go to St. Niklaus and thence to Zermatt. We carried out our plan successfully, and reached the inn on the Riffelberg Tuesday afternoon, about 3 P. M. On the way we were joined by a young American from Boston who has travelled very largely. He had a desire equally strong with my own of climbing that terror of the Alps, Monte Rosa. Several ascents had been made this summer before we arrived. At Zermatt we saw three London young men who had made the attempt and gave it up only eight hundred or one thousand feet short of the summit, and we thought, after looking them over pretty carefully, that we were good for one thousand feet more than they. At the inn on the Riffelberg we met a young man who had achieved the ascent, and who told us so much about it that we determined to make the attempt the very next day if the weather should permit. We were fortunate in getting three of the very best Zermatt guides, and went to rest with our arrangements made and waiting to see what solution of the problem of the skies the morning would give.

Without describing what took place in those hours of delay I still wish to interrupt my narrative at this point with an episode about Monte Rosa. The great Italian mountain, in the estimate of most persons, is Mont Blanc of course. But Lord Byron never saw Monte Rosa, and though it is only a few feet lower than its great rival of Chamouni it never had any hymns sung in its praise till a few years ago. Indeed it had never been ascended to the very summit until the year 1855. I have read in some of the books on Monte Rosa that when De Saussure, that intrepid explorer of the Alps, was at Zermatt, he was unable to persuade the guide to ascend the last two peaks of this mountain and was compelled to abandon the attempt. The way up was at last found (as I think has been true in the case of nearly all the more difficult Alpine

Summits) not by a guide, but by a company of English travellers. I say the way was found by them, but this is not quite correct; for many persons before them had stood at the bottom of the Zumstein Spitze, eight hundred feet below the summit, and seen a way up which they had not the courage to attempt; and after having myself passed up that tremendous pathway of ice, I am perfectly convinced that, were the way untrodden, and could not the traveller be assured by knowing that others had found it practicable, he would turn away content at having surveyed the steps which lead to the inaccessible summit. This at least was the fate of every one who went alone to that spot and attempted to get higher, — and the Hôchste Spitze, as it is called, was never made until six or seven persons, Englishmen and their guides, went to work together, and (tied together with a rope so that if one fell the others could save him) pushed along slowly and bravely to the very top. There they saw a grander view than Mont Blanc affords; and, though none of the difficulties of the ascent have been removed, a number of persons have followed them, each succeeding year, to the same grand height.

Murray, in comparing this with Mont Blanc, says there is no difficulty in the latter, and, comparing it with the ascent of Rigi — a mountain as difficult as Mount Washington — calls the latter a pleasant promenade. It may be so in comparison, (and I think it is,) but in fact I can say, after walking up it, that to go up Rigi, even, is quite a trying thing in a hot day. But, difficult as Monte Rosa is, all who have made the ascent have agreed that the world has no other point of view to equal it. I will not now describe the scene which there opens to the eye, but merely say — what more than one Englishman has said to me after having ascended both Mont Blanc and Monte Rosa — "there is nothing to be seen from Mont Blanc, and it is foolish to make the ascent when Rosa is practicable."

To return from this digression: we were to start at 3 A. M. if the morning promised good weather. But at three the skies were doubtful, and we did not get off till a quarter of five. An Englishman who had himself made the ascent walked with us to the Gôrner glacier to enjoy the sunrise over Monte Rosa and the Lys Kamm, — which was indeed indescribably beautiful. The soft

tint of morning fell upon the spotless snow and lay there till it brightened into the splendor of day. Behind us, at the end of the valley which contains the Gôrner glacier, and closing the view in that direction, rose the colossal stony pyramid of Monte Cervino, so steep that no snow adheres to its sides. Its inaccessible summit, four thousand feet above the snow from which it seems to rise, and nearly fifteen thousand feet above the sea, caught also the first rays of morning and stood up in its many-colored magnificence, the only reminiscence among its snowy sisters of a world not covered with the glacier. One hour and ten minutes from the hotel brought us to the ice of the Gôrner glacier; forty minutes more took us across to the moraine on the other side, where the guides laid away a bottle of wine for the descent, and permitted us to take a drink of cold water. One hour more, up an icy hill about as steep as the lawn in front of the Hillhouse place, with deep crevasses opening on every side, brought us to our breakfast ground — a mass of broken rock, rising out of the glacier, and named "Auf der Platte." Here the guides brought out their stores of hard boiled eggs, bread, cheese, meat, and wine. When these were eaten, or rather when as much was done in that direction as Kronig (the Grand Mogul of Monte Rosa) thought fit, the bags were shut, we were placed in line, and the rope (that signal that the time for hard work had come) was got out and all hands tied together in a line. King Kronig went first with his ice axe, to cut steps and hold on with the beak on the back of the axe; I next, three feet behind him; next Anton Rytz, a famous guide, with his face in a mask of checked cotton, who shouted "vorwarts" whenever Kronig cried "courage;" next came my friend Mr. ——, and last of all Franz Blatter, who sang "Ranz des vaches" all the way up, and who, if not strong enough to lift Monte Rosa itself, was abundantly able to carry any ordinary man to the top of it. Thus arranged we soon began to climb up the glacier, already quite steep (about 12°), — up, up, up, and ever up we went slowly and looking sharp where we stepped. First the surface was much like any ice that has been snowed upon and frozen again. Then we came into loose snow, three or four inches deep, which in its nature was a sort of compromise between hail and crystals. The path wound around from one ascent to another like a great serpent trailing between

rounded hills of snow; what at one moment seemed like the crest of the ascent soon turned out the base of another, and where we discovered a level plain we were not permitted to go.

At first we walked a half-hour together and then stopped for breath; but before long Kronig complained that we stopped every fifteen minutes; and after a while he declared that if we had our way it would be fifteen minutes walking and fifteen minutes on our backs on the snow — and then it would be all up for the Hochste Spitze. In the midst of these dismal forebodings I heard a heavy fall and the call of the guides behind, "attendez." I looked around. Blatter was rushing furiously down hill — for what, did not appear. But I soon saw that Mr. —— had fallen down exhausted and let his alpenstock go where he himself would have gone had not the strong arms of Tony Rytz been on him, and a good twist of the rope around him. His face was pale, his lips blue, and Kronig whispered to me in German, that it was impossible for him to reach the summit. However he rallied and went on very well. After three hours of such painful drudgery we reached the foot of the Signal Kuppe, where the guides took off their knapsacks — all hands had some new refreshment for the last great labor — the rope was doubled around us — and then Kronig set out ahead, cutting zig-zags in the fearful dome of ice we had to climb. In the earlier part of the morning I had looked around a good deal on the scenery; but as we went higher and the labor became greater, I could not afford to throw away strength enough to look around; and now in this spot my horizon was restricted to the three feet square which lay under my eyes. After a long time of zig-zagging up and back, around a dome of ice so steep that it would be impossible to stand on it anywhere without having places cut for the feet, we surmounted the Signal Kuppe dome, and stood at the base of the peak of terror — the Zumstein — where, even now, fully one-half of the few who come to it turn back. Here we looked back upon the ice wall we had edged around, step by step, putting our toes in holes cut in the ice, and saw that though it was at an angle of nearly forty-five degrees it was nothing in comparison to the eight hundred feet which remained. There were still two peaks above us which rose like crests one behind the other and in the same line — sharp, like a hatchet, and accessible only over

what may be called the *blade* of ice which formed the ridge. It is a fact that the path here was a scant foot in width, — on the right was an abrupt precipice three or four thousand feet in depth, — on the left an almost equally steep declivity. Up this comb of ice Kronig cut steps and shouted "courage" with stirring drum-like voice, while Blatter, every few minutes, sang "Ranz des vaches" for our amusement. The excitement of such an ascent and of the scene around and before was so great that I felt no fatigue, and marched up as easily as if it were over a stairway. After proceeding thus some twenty minutes, I learned by accident the meaning of something which had been unintelligible to me in descriptions I had heard of this part of the ascent. It happened that, in striking my alpenstock into the ice for a good hold, it seemed once to go through; and when I drew it up to see what was the matter, there was a little round hole punched through the ice under my feet, through which I could look down several thousand feet along the face of a greenish-blue icy precipice. If I did not comprehend at the moment the full meaning of this observation, I did an instant later, when I came upon a larger hole through which I could see at leisure how the mountain was constructed, and in particular what sort of support our path had. The case, as I understand it, is that this ice has filled in the hollow between one peak and the other, and while it is banked out in a steep declivity toward the north, on the south it is built up straight above the precipitous rocks, and even overhangs them, as is often the case in a drift of snow. Hence it happens that the only place possible for an ascent is the icy path overhanging the tremendous gulf I have described. We went up without any slip against a boisterous wind, and after a hard struggle with the rocks reached the bottom of the Hochste Spitze. On reaching the summit of the Zumstein we rested on the warm side of the rocks, then worked our way down a hard descent of fifty feet, and there found ourselves at the bottom of the Hochste Spitze. It is more steep than the Zumstein, but not as dangerous; for the path lies back two or three feet from the edge of the snow and ice. When this crest was surmounted we stood on the Hochste Spitze, but not on its highest point. These mountains are a kind of slate which breaks up easily into large and small blocks; and where the summit is a thin blade of stone, like Monte

Rosa, it is not one piece of rock, but more like a wall loosely put together and broken down. I fancy that once this whole peak was one narrow wall of rock, eight or ten rods long, running east and west, and highest towards the east. The action of frost and weather and other natural forces broke it up into blocks, and in the process of time cut a breach through the middle, leaving it as we found it, a double or forked peak with the shorter tine first, or toward the west.

To give some idea of the difficulty of crossing this little gap and actually getting upon the opposite and highest point, I will say that, although it is not thirty feet deep nor twenty feet broad, still the two German brothers Schlagintweit, who were certainly brave men and most intrepid explorers, and who had nerve enough to mount, first of all who have attempted it, on the lower tine of the summit, gave up the other. It was not the muscular exertion which deterred them, nor the time likely to be occupied in crossing the gap; for I passed straight through it at a burst, and was on the topmost point in two or three minutes afterwards. But it must have been the dreadful unknown task of venturing out over that airy walk and on to that apparently unsupported summit, where no previous foot had been, and whose accessibility they could not prove beforehand and could scarcely believe when looking upon it. It was a far different thing for us to do. I knew that the path was firm and that we could all sit on the summit, though only one at a time could mount the sharp point which caps it. I knew that there was no great labor in the undertaking, and no danger if my head was steady and my courage good. All this made it a perfectly easy thing for me to do, and I so forgot both difficulty and danger and the descent, that the hour we spent on that stony point, 15,223 feet above the sea, was one of the most delightful in all my life. Around us on every side were great mountains sunk down beneath their snows, like abashed virgins drooping in reverence; north, east, and west, a panorama of majestic mountains lay around us. The dark needle of the Finster Aarhorn rose out of the snows of the great glacier of the Aar, — Schreckhorn, Wetterhorn, Titlis, the Eiger, and the Sidelhorn stood around it like an ancient brotherhood of giants. The Bernese Alps drew out their line in equal beauty and majesty from the Angelhorner and the Wetterhorn till

it seemed to run up into the skies from the Silberhorn and the Jungfrau. Nearly due west lay the immense mass of Mont Blanc, white and glistening, — the one summit over which the eye could not range. The space between was filled with whatever of lake or mountain, of valley, field or barren moor, there is in Switzerland — lonely snowy points rising one above the other — dark black-ribbed glaciers rolling into the valleys — here a dome of snow capping the mountain with a biscuit-like cover of the purest white — while, all around the broken edges, blue avalanches were ready to drop into the grey and hazy depths beneath them. Southward, the eye looked through a bright blue sky into Italy, — first over the Pennine Alps, resting for a moment with admiration upon that most grand and pleasing object, the Becca di Nona: then in swift flight it passed from the thousand peaks and vales of Piedmont to Lago Como and Maggiore, — and thence ran straight out into the plains of Lombardy and Venetia. How can I ever describe what my eyes saw in this view. I stood there drinking it in with delight — I know not how long. I bade myself remember this and remember that; but, now, what can I recall. Becca di Nona is a distinct form in my mind, but beside this all is a formless procession of beautiful images — a delightful memory of evanescent things whose shape I do not know that I ever saw, and with respect to which I am certainly unable to say at this moment of what they consist. I remember a light falling down upon Italy, blue, soft, and yet so distinct and clear that all I saw against the sky had an edge — but it was an edge of velvet. I remember how my eye, accustomed to the altitudes of the Alps, at first refused to rest upon the blue plains of Italy, but adjusted itself to them as clouds in the air, till at length after something like a struggle it took the right focus, and falling down to the level of the sea, made me conscious of my own great elevation.

It is impossible to describe the light which illuminated the Italian view. It was a substance — as it seemed — and a color; and yet it was soft and clear. It glowed without being hazy, and gave everything with great distinctness without letting the eye into the deformities of the country, or displaying the formless and less pleasing secrets of the landscape, as the midday sun of Switzerland does. The guides said that in perfect weather the spires of the

Cathedral at Milan are visible, and that the eye can reach nearly as far as Venice. There were clouds on our horizon, and some of the valleys were filled with their billowy masses. The wind tossed them about like balloons, and as they rose and fell and tumbled about on the unstable support of the air (as it seemed to be), and as at times they dissolved or broke apart, we had lovely views of the country below.

My companion reached the summit a few minutes after I did, but immediately fell asleep and could not be roused till a few minutes before we left the top. I really did not observe how he came up the Zumstein or the crest of the Hochste Spitze, but I well remember seeing him lying flat on the lower tine of the summit, whence the guides steadied and lifted him up till he was on the top; when he did precisely what Albert Smith did on Mont Blanc, i. e., went to sleep. I made a number of observations upon myself, and could not see that the great altitude changed my bodily condition in any way. I was not sick at the stomach at all — my breath was neither shorter nor deeper as I could perceive — my head was not at all infirm. Hearing was equally good, as I can testify after having been bothered with Blatter's incessant "Ranz des vaches." The air filled my lungs as it does elsewhere, and from observing myself I could detect none of those signs of a great altitude which other persons have felt on the summits of such high mountains. On Faulhorn, and at other times when I have been on high mountains, I have noticed the darkness of the sky, and was prepared to find the vault of a deep and almost blackish blue on Rosa. But in this I was disappointed; and I do not know to what I am to attribute its ordinary appearance unless to the slight haze which, as it were, detained the eye in an illuminated atmosphere, and prevented it from looking into the thin, clear and rayless space which so many observers have described as the dark vault seen from the summits of high mountains. I have an indistinct recollection of having felt cold, and am certain that the guides said they were, and that it would not do to remain longer in such a wind. What the temperature was I do not know, although there was a minimum thermometer there which had been placed by the Alpine Club. But I could not make out anything from it because the indicating fluid was perfectly colorless and seemed to have faded out, so that

it was impossible to see where the column stood. At last we commenced the descent, at 1 o'clock P. M.; but first I went up the pinnacle once more and waved my adieus from it to the silent world of majesty and beauty which in an hour of time had given me so much pleasure. In the silence of those solitudes my voice was lost, — nothing that we could do seemed able to disturb it. The wind, which blew in tremendous gusts and then subsided, was the only sound which filled those spaces, except when the avalanche (of which there were many during our ascent) added its thunder to the roar of the tempest, or sliding down amid the silent snows grew into a sound which waved through the air and made the mountains tremble.

But this is not the descent. I confess I was more nervous about going down than I had been at any time in going up. One hour was consumed in the first eight hundred feet — then soon after we came to the dome up which our zig-zags ran and which we had climbed so slowly in the morning with our faces to the wall and our toes in the holes in the ice — edging our way along, a step at a time. Soon we saw, below, the knapsacks of the guides where they left them, with the bottle of champagne and other refreshments they had brought up and deposited there where the labor and danger of the ascent both begin and end, — to celebrate with them our victory, when we had come once more into safe places. Four hundred or five hundred feet above this spot the leading guide, John Kronig, sat down on the snow; and while I was wondering what was to happen, Mr. —— was got into place behind him, his feet put forward under the guide's arms, — then the second guide followed. I instinctively took my place, supposing it would be quite right, but rather hoping we were not going to slide down that tremendous declivity at the risk of our pantaloons. However, the sun, which was cold on the top, was warmer here, and the loose snow was soft to a depth of three or four inches, and the guides meant to improve it; so when all was ready Blatter sat down behind me, and off went the five like a kind of human sled. The guides' alpenstocks, managed by their strong and skillful arms, kept us in line, and, I suppose, lessened the speed somewhat. But they had, after all, so little power against the force of gravity that we shot down like an arrow and ploughed into the snow opposite

our camp — all wanting to laugh and shout, but utterly without the breath required in such exercises.

When we were on our feet again the lunch came out and we had a merry time in consuming it. The guides danced and rolled about on the snow, and sang rattling French songs with a perfect *abandon*, as if delighted to have come down Monte Rosa once more alive. We were still a great way from the hotel — not less than eighteen miles. The guides said it could not be done in less than three hours, and we made up our minds to see if we could accomplish it in that time. The rope which had been taken off at lunch came out again, and we were all tied together once more in a line: — and now the problem was to slide down in one hour the glacier which had cost us five in the morning. We stood up straight, and steered with our alpenstocks; the strong arms of the guides served for rudders, stays, and breaks; and down we went at a tremendous speed. Do not think, however, it was mere sport. My legs would now and then tremble under the exertion to keep them in place, my breath would give out, and after fifteen minutes of such rapid descent we would have to lie down and get ready to try it again. The steep places were passed sledwise. The ladies had gone up to the top of Gorner Grat about 1 P. M., to watch our progress, and there beside having one of the finest views in Switzerland to enjoy, had the full sight of our novel method of descent. Some gentlemen were with them who had made the ascent themselves and were able to show them where to point their glass in order to find the exceedingly small black specks they were looking for. It last these were discovered refreshing themselves at the bottom of the dangerous peaks, and then sliding down hill at an unheard of rate; and finally they disappeared among the rocks in the moraine of the glacier, when they were lost for the time, and not again seen till they appeared at the hotel, some two hours from the place. I believe the distance up and down is rated at forty miles. We were absent from the hotel thirteen hours and a quarter; of which three hours and a half were consumed in the halt on the summit and those for breakfast and the other lunches up and down. — *Silliman's Journal.*

CRYPTOGRAPHY.

CHILDREN'S papers abound in puzzles, which afford an innocent, and, perhaps, a profitable amusement. Any puzzle or enigma, which teaches the mind to reason closely and analyze carefully, must at least afford a healthful mental exercise. To this class belongs the deciphering of cryptographic symbols. In reading the works of the poet Poe, a few years since, we first became interested in the modes of deciphering cryptograms, in which he is said to have possessed a wonderful power. We give below a specimen of cryptographic writing, which we hope will not vex the printer, and will interest the reader. Mr. Poe classes such cryptograms among the easier kinds to decipher.

85..†.4;5—6=(266.×85.(—‡1×—†85.(.8(.—85—63.=7†85.2(×.(16.[=. 99.†8—†×85.—(4;161†+1†.6‡1(186÷.†‡2‡.652]6÷(.—86)199—†+3(—)·(; ÷.†61÷.9] 185 85.+27(858.†85—†×851 (81.85 2+27 (68—8. —†×61 [285.((.÷14.†86=2).(685.(.8(.—8÷.†37(†6.×.]199‡(28.=827((1÷58÷.†4===9. 99—†]199 622†4..876—†×].+..9 67(. 2+6—+.8;—†×) 1=82(;

By what mental process, now, shall we read the above cipher? We will give a few hints, after Mr. Poe's method of analysis:

1st. Observe the great frequency of the dot. Now as *e* is our most frequent letter, it is probable that . means *e*.

2d. Observe how frequently the combination 85. occurs. Now as it ends with a dot, and as the article *the* is the most frequent word in our language, it is probable that 85. means *the*, that is, 8 means *t*, and 5 means *h*.

3d. Observe the frequency of 85, that is *th*, in the middle of the cryptogram, and at regular intervals. Now as *th* is frequent in numerals, like fourth, fifth, sixth, etc., this may be an enumeration of dates, or regiments, or something else.

4th. Observe the frequency of the doubling of the cypher 9. Now as 9 is only moderately frequent and is often doubled, it probably means the letter *l*.

5th. Observe, near the last, the combination = = 9 . 99, which, if our hypothesis is correct, is *lell*, preceded by a double letter. Can this be *bblell*? No. There is no such combination. Well, then, can it be *cclell*? Let us repeat it and sound it over, and see if it gives forth any familiar accents. Yes. We have it, *McClellan*.

6th. The combination before *McClellan* is ÷.†, his title, *Gen.*, and the enumeration above refers to regiments, probably.

7th. All the inferences above seem to afford confirmation of each other. Did they not, we should throw them away, or a part of them, and start anew. But we are evidently on the right track, and having found that — means *a*, that = means *c*, that 9 means *l*, that . means *e*, etc., etc., the whole is now easily solved and read.

Cryptograms, like the above, in which the symbols represent the letters of the words of plain English sentences, in which no attempt is made to present special difficulties, could be studied out, we believe, by a bright boy or girl, and would afford them an interesting and profitable mental exercise.

A LEAF FROM MY SCHOOL DIARY.

"STOP that!"

I was bending over a desk, illustrating a principle to one of the boys. It was a half-suppressed exclamation, yet easily distinguished.

"Sebut, that was you."

"Yes, sir," was the reply.

"Why did you say it?"

"Because I wanted to."

"What reason had you for saying it?"

"No reason, sir, only that I wanted to."

"But no one utters exclamations without a reason. If it is proper I must know the cause of it."

The latter sentence was spoken firmly, bnt the boy was obstinate. He only repeated,

"No reason, sir, only that I wanted to."

Both surprised and vexed — surprised that a boy, who, for two winters, had been one of my best, should now be suddenly disobedient, vexed at the seeming insolence of the replies — I sent him forward to the desk, determined to whip him until he should tell the cause of the exclamation. But the determination was hardly taken before it was put aside. A phase of his character, which I

had never seen before, was now for the first time revealed to me. I would not act hastily, therefore. I feared, too, that, if I attempted to conquer him, I myself would be the conquered party in the end. I had seen, when a boy, a schoolmate, one possessed of high moral qualities, an affectionate boy, yet obstinate as a rock, whipped one whole hour in the attempt to force him to do something which he had refused to do. But I had no desire to whip the boy — he had been too good. I had asked the question, too, — a proper one — and it must be answered. I chose what I thought then to be, and which afterwards proved to be, the wiser course. I told him he might be seated and remain with me after school. I thought I would try to persuade him by reason and appeal, to make him if possible *conquer himself*, and use the rod only as a last resort.

The school was dismissed. I called him to my side, spoke to him kindly, reasoned with him, appealed to his sense of right and natural goodness, a large share of which I knew him to possess. For three-quarters of an hour he remained firm, — a long time, twice I had almost given up — then I heard a choking in his throat, he turned his head aside, and with bursting tears gave me the answer. Then he opened his whole heart, and told me why he had refused to answer the question before. With a word or two, thanking him, and telling him how much better it was for him, and how much pleasanter now for both of us, I dismissed him.

I thought that evening while going home that a lesson had been learned worthy of record. My mind went back to when I, too, was only a schoolboy of fourteen winters, and the heavy blows — it seemed to me, then, merciless ones — many an obstinate schoolmate had received from his teacher, who had neither the desire nor the patience to appeal to the higher motives of his nature, that he might conquer him. How many natures, too, those blows had made no better, but worse!

The next day there was placed upon my table the largest Baldwin apple I ever saw, cherry and mellow. It explained itself. Who shall say that from this time there was not a warmer and stronger attachment between the teacher and pupil?

MARK MILES.

VERDICT OF A JURY OF BOYS.

When Dr. Nathaniel Prentice taught a public school in Roxbury, he was very much a favorite; but his patience at times would get very much exhausted by the infractions of the school rules by the scholars. On one occasion, in rather a wrathy way, he threatened to punish with six blows of a heavy ferule the first boy detected in whispering, and appointed some as detectors. Shortly after, one of these detectors shouted:

"Master, John Zeigler is whispering."

John was called up, and asked if it was a fact. (John, by the way, was a favorite both of his teacher and schoolmates.)

"Yes," answered John; "I was not aware of what I was about; I was intent on working out a sum, and requested the one who sat next to reach me the arithmetic that contained the rule which I wished to see."

The Doctor regretted his hasty threat, but told John that he could not suffer him to whisper or escape the punishment, and continued:

"I wish I could avoid it, but can not, without a forfeiture of my word, and the consequent loss of my authority. I will," he continued, "leave it to any three scholars you may choose, to say whether or not I omit the punishment."

John said he was agreed to that, and immediately called out G. S., T. D., and D. P. D. The Doctor told them to return a verdict, which they soon did (after consultation), as follows:

"The master's word must be kept inviolate — John must receive the threatened six blows of the ferule; but it must be inflicted on voluntary proxies — and we, the arbitrators, will share the punishment by receiving each of us two of the blows."

John, who had listened to the verdict, stepped up to the Doctor, and with outstretched hand, exclaimed:

"Master, here is my hand; they shan't be struck a blow; I will receive the punishment."

The Doctor, under pretense of wiping his face, shielded his eyes, and telling the boys to go to their seats, said he would think of it. I believe he did think of it to his dying day, but the punishment was never inflicted. — *Middlesex Journal.*

THE TOOLS GREAT MEN WORK WITH.

It is not tools that make the workman, but the trained skill and perseverance of the man himself. Indeed, it is proverbial that the bad workman never yet had a good tool. Some one asked Opie by what wonderful process he mixed his colors. "I mix them with my brains, sir," was his reply. It is the same with every workman who would excel. Ferguson made marvellous things — such as his wooden clock that actually measured the hours — by means of a common penknife, a tool in everybody's hand, but then everybody is not a Ferguson. A pan of water and two thermometers were the tools by which Dr. Black discovered latent heat; and a prism, a lens, and a sheet of pasteboard, enabled Newton to unfold the origin of light and the composition of color. An eminent foreign *savant* once called upon Dr. Wollaston, and requested to be shown over his laboratories, in which science had been enriched by so many important discoveries, when the Doctor took him into a little study, and, pointing to an old tea-tray on the table, containing a few watch-glasses, test-papers, a small balance, and a blow-pipe, said: "There is all the laboratory I have!" Stothard learned the art of combining colors by closely studying butterflies' wings; he would often say that no one knew what he owed to these tiny insects. A burnt stick and a barn door served Wilkie in lieu of pencil and canvas. Berwick first studied drawing on the cottage walls of his native village, which he covered with his sketches in chalk; and Benjamin West made his first brushes out of the cat's tail. Ferguson laid himself down in the fields at night in a blanket, and made a map of the heavenly bodies by means of a thread with small beads on it, stretched between his eye and the stars. Franklin first robbed the thunder-cloud of its lightning by means of a kite made with two cross-sticks and a silk handkerchief. Watt made his first model of the condensing steam-engine out of an old anatomist's syringe, used to inject the arteries previous to dissection. Gifford worked his first problem in mathematics, when a cobbler's apprentice, upon small scraps of leather, which he beat smooth for the purpose; while Rittenhouse, the astronomer, first calculated eclipses on his plough-handle. — *Selected.*

Resident Editors' Department.

AT WORK AGAIN.

VACATION is over! We generally say that in gladness. Six weeks' vacation is usually more than we know what to do with. But this year we have had no vacation. Our time has all been taken up with the war. There has been something to do continually, and there has been so much anxiety, so much depression at times, that we felt Monday morning when we took up the threads we had dropped, and commenced the old work again, O, for a good rest! for one week of perfect quiet! Then what a day it was! *Banks cut off, and his whole division taken prisoners! McClellan a traitor! Our army falling back upon Washington!* Things looked dark. We commenced our year's work as never before.

The next day things cleared up a little. Banks was safe. McClellan was still loyal. But there was the rebel army still threatening Washington, and seemingly no power on the Union side to drive it back; and then came the report, *Cincinnati threatened!* We felt "blue." Not that we were utterly discouraged; but we could not understand this way of "driving the enemy to the wall." It seemed somehow as if the wall had got round the other side and was pressing against us.

We have kept school, however, just as usual. We have done just as much work as we ever did in the first two days of the term. But we have drawn a good many long breaths, and have felt such a sense of heaviness, that it seemed more like the end of a long wearisome year than the beginning of a new. We long for good news! Let the telegraphic wires throb with the intelligence that *the rebels are driven back; that they are in full retreat upon Richmond, and going so fast they cannot possibly stop there! that the stars and stripes flaunt gayly over Sumpter! that Charleston has succumbed to Federal rule!* and twenty years would drop from our shoulders, leaving us young, vigorous and light-hearted, able to work with a will that would brush away all obstacles as easily as so many cobwebs.

But sadder yet! While we write, intelligence is brought that *our army is retreating upon* WASHINGTON! *that* JACKSON *with a large army is moving towards* BALTIMORE! No deliverance yet! Disaster greater than ever stares us in the face! What shall we do! Only one answer comes, have faith in God and our cause. It may be we are to suffer, and that terribly! We deserve to suffer. We have nursed a viper and must expect to writhe

under its sting. But God will not desert us. He lays his hand heavily upon us only that he may strengthen. He brings us to the flame only that he may purify. Disasters, we know not how many or great, may come upon us; but when we have been quickened into a purer patriotism, into a holier love of liberty, then His face will be turned towards us, His right arm will lead us on, and we shall look no longer in vain for a deliverer.

Many of us return to our schools feeling that we may be summoned from them to buckle on our armor and go forth to service upon the battle field, — all with extreme solicitude. The nation is imperilled, and among its brave defenders are brothers, friends, neighbors, and every battle brings sorrow, O, to how many hearts! But let us be patient and hopeful, day by day doing faithfully whatever work is assigned us. The world moves on. To-day we are in the shade; to-morrow we may be in the sunlight.

MEETING OF THE STATE ASSOCIATION.

WORCESTER, August 18th, 1862.

THE Eighteenth Annual Meeting of the Massachusetts Teachers' Association was held in the City Hall, Worcester, on the 18th and 19th of August, 1862.

The meeting was called to order by the President, John Kneeland, Esq., at 2½ o'clock, P. M.

Prayer was offered by Rev. Dr. Hill of Worcester. Rev. J. D. E. Jones, Superintendent of Public Schools, Worcester, made an address of welcome, to which the President responded, and then delivered his annual address to the Association.

The records of the last annual meeting were read by the Secretary and approved.

The Treasurer, James A. Page, then read his report, which was referred to an auditing committee, consisting of Messrs. Hammond, Stone, and Hutchins.

Messrs. Green of Worcester, Parish of Springfield, Storrs of Amherst, Dickinson of Westfield, White of Williamstown, Boltwood of Lawrence, Sheldon of West Newton, Page of Boston, Putnam of Quincy, Rugg of New Bedford, Hutchins of Boston, Hammond of Groton, Bigelow of Framingham, and Stone of Plymouth, were appointed a Nominating Committee.

Wm. E. Sheldon presented the report of the Committee on "*The Legal Recognition of Teaching as a Profession*," as published in the last number of the *Teacher*. On motion of Mr. Page the report was accepted.

The following question was then discussed: "*What is the Extent of the Teacher's Authority over his Scholars beyond School Hours?*"

The discussion was opened by Hon. Joseph White, Secretary of the Board of Education. He was followed by Messrs. Parish, Boltwood, Hammond, Walton, Claflin, Page, Green, Hooker, Chase, Jones of Worcester, Jones of Roxbury, Bigelow, and the Rev. Mr. Souther; after which the Association adjourned till evening.

EVENING SESSION.

At 8 o'clock, a lecture was delivered by J. K. Lombard, Esq., of the Worcester High School, on "*The Pleasures of Teaching.*" Adjourned.

TUESDAY MORNING SESSION.

Meeting was called to order by the President, at 9 o'clock.

Prayer was offered by the Rev. Merrill Richardson of Worcester.

The report of the Nominating Committee was then made and accepted.

The Committee were instructed to obtain printed ballots for the election of officers.

Messrs. Sheldon and Parish spoke in reference to the time of holding the meetings of the Association.

Moved by Mr. Walton, that the next Annual Meeting be held in the month of August, at the discretion of the Directors. The motion was passed.

At 9½ o'clock, S. W. Mason, Esq., of the Eliot School, Boston, lectured on the "*Utility and Practicability of Gymnastics in Public Schools.*"

Mr. Mason then introduced a class of twenty boys who gave an exhibition of gymnastic positions as practised in his school.

Voted, on motion of Dr. Lewis of Boston, that the unqualified and unreserved thanks of the Association be tendered to Samuel W. Mason and his fine class of boys, for their instructive and beautiful exhibition of school gymnastics.

Dr. Lewis offered the following resolutions, and spoke upon the importance of physical culture.

Whereas, The subject of Physical Education has evoked general interest throughout our country, and

Whereas, Several persons have invented systems of muscular training, each of which may possess valuable features, and

Whereas, It is important that teachers everywhere should enjoy the advantages of the experience of these inventors, therefore

Resolved, 1*st*. That this Association would respectfully suggest a National Convention for the discussion of Physical Culture.

2*d*. That all teachers of gymnastics should be invited to attend and present the claims of their various modes.

3*d*. That a committee of men and women might be selected who should report upon the various modes or systems presented, indicating the exercises which in their judgment were best adapted to schools.

4*th*. And that a class-book of Physical Culture which should contain the exercises approved by the committee, might extend to the schools of our whole country the best thoughts and practices of those who have given their attention to the subject.

J. W. Bulkley of Brooklyn, N. J., made a few remarks upon the resolutions, and upon his motion they were referred to a committee of three to report at the next annual meeting.

Dr. Lewis, Mr. S. W. Mason, and Rev. B. G. Northrop were appointed the committee.

Remarks were made further on the subject of Gymnastics by Prof. Russell, Messrs. White, Boltwood, Boyden, and Northrop. Adjourned.

AFTERNOON SESSION.

At 2½ o'clock the following officers were elected:

President — Wm. E. Sheldon, West Newton.

Vice Presidents — Thomas Sherwin, Boston; Geo. C. Wilson, Taunton; Geo. N. Bigelow, Framingham; A. G. Boyden, Bridgewater; A. H. Cornish, Plymouth; B. G. Northrop, Saxonville; Ivory S. Cornish, New Bedford; Wm. Russell, Lancaster; J. W. Dickinson, Westfield; C. C. Chase, Lowell; Daniel Mansfield, Cambridge; Chas. Hutchins, Boston; James S. Eaton, Andover; Ariel Parish, Springfield.

Recording Secretary — T. D. Adams, Newton.

Corresponding Secretary — J. E. Horr, Brookline.

Treasurer — James A. Page, Boston.

Councillors — Chas. E. Hammond, Groton; Josiah A. Stearns, Boston; D. B. Hagar, Jamaica Plain; A. P. Stone, Plymouth; Chas. Ansorge, Dorchester; John Kneeland, Roxbury; H. R. Greene, Worcester; Chas. P. Rugg, New Bedford; Ephraim Flint, Jr., Lee; John D. Philbrick, Boston; B. W. Putnam, Boston; Granville B. Putnam, Quincy.

The retiring President appointed Messrs. Bigelow and Parish to conduct Mr. Sheldon to the chair, which duty they performed. The new President made a brief and appropriate address, thanking the Association for the honor conferred upon him. A lecture was then delivered by Geo. N. Bigelow, Esq., Principal of the Framingham Normal School; subject, "*Something about many things.*"

At 4 o'clock commenced a discussion on "The best Method of increasing the Moral Sentiment of a School." The discussion was conducted by Messrs. Goldthwait, Dickinson, Richards of Washington, D. C., Allen, Green, Ward, Claflin, Hewett, and Russell. Adjourned.

EVENING SESSION.

Meeting was called to order by the President at a quarter before 8 o'clock.

Mr. Walton of Lawrence, then offered the following resolution, which was unanimously adopted:

Resolved, That the thanks of this Association be presented to those newspaper editors who have given gratuitous notice of this meeting; to the several Railroad corporations that have furnished us tickets at reduced rates; to the City Government of Worcester, for the free use of the City Hall for our sessions; to the keepers of the various Hotels in the city, for a liberal reduction in charges for entertainment; to the lecturers for their able addresses; to the Eliot boys for their excellent gymnastic exercises, and especially to the retiring President for the kindly and efficient conduct which he has given to the meetings of the Association during his administration.

The President and Mr. Kneeland then made some remarks in behalf of the *Massachusetts Teacher.*

The following resolutions were then read by the Secretary and adopted by the Association:

To the President of the United States:

Whereas, We regard with fearful interest the progress of the civil war now raging in our land; and whereas we have endeavored to comprehend the causes of the same, and whether in the light of reason, philosophy, and Christianity or in

view of the incidents of the war and the principles from time to time enunciated by the leaders of the rebellion, we can arrive to but one conclusion, therefore

Resolved, That we believe the present controversy is between Christianity and heathenism; between civilization and barbarism; between national life and national death; between freedom and slavery; between life to the hopes of millions here, everywhere, of millions yet to be, and death to those hopes; and however we state the question, the issue at present involved is neither partisan nor political, but moral and national.

Resolved, That the present civil war is but the rational and legitimate result of the controversy between freedom and slavery during the last twenty-five years.

Resolved, That we believe the fault of our times lies first, in a misconception of these ideas; and in the second place, in our public men; that we believe the idea of freedom for the human soul is just, Christian, and divine; and if this be true, slavery must be inherently and intensely wrong; and if our public men, whether in the pulpit, at the bar, in the professor's chair, or in the teacher's desk, had but clearly and boldly enunciated these truths, there would be no war in our land to-day.

Resolved, That as instructors of the rising generation, we believe it to be our sacred duty to implant and cultivate in the hearts of youth a more generous spirit of patriotism, a clearer knowledge of the principles of our government and a higher regard for the principle of freedom: but we have very little hope for the long cherished results of our labors, if this rebellion is to succeed; that in such triumph we see the subversion of the dearest rights of a free people, when we reflect that slavery, ignorance, darkness, and a military despotism are to be the chief supports of in the new order of things proposed.

Resolved, That we believe emancipation to the oppressed to be one of the prominent ideas and the crowning glory of our country and age; and that we find in the annals of our race, no opportunity ever presented to any ruler or government to win eternal glory to themselves and their people like that now presented to the President and government of the United States.

Resolved, That we have confidence in the wisdom of the President and his advisers, and approve of the caution which has marked their policy; but now we believe that nothing short of a most vigorous policy supported by immense numbers of men will conquer the rebellion and fix in our favor the political status of certain nations abroad; and that nothing short of emancipation will satisfy the Christian world.

Resolved, That we look forward with hope to the time when freedom with all her glories shall move over the States of the South, there to enlarge the domain of thought and to develop the resources of the land as the same generous principle has already done in the North; and that as teachers we are ready if need be, to lay aside the implements of our profession and to assume as far as we are able, the instruments of war to secure this consummation so devoutly to be wished.

The audience then listened to an able and instructive address from His Excellency, Gov. Andrew, upon "*The Responsibilities of Teachers in Relation to the Present Crisis of our Country.*"

The Association then adjourned *sine die*.

T. D. ADAMS, *Recording Secretary.*

NO APOLOGY.—If any apology is needed for the delay of this number, our readers must make it for us. Would they perform editorial service in vacation?

TEACHER'S AUTHORITY BEYOND SCHOOL HOURS.

[*Discussion at Worcester, from the Worcester Spy.*]

Hon. Joseph White, Secretary of the Board, said the more he had thought of the question the more he had become satisfied that the best way was to let it alone to the practical sense and sound judgment of the teacher and parent as cases may arise. The real question lies back of the formal one. "What are the teacher's responsibilities and duties?" Among the duties prescribed by statute is that of teaching good behavior. The teacher's duty in relation to his pupils out of school, may be measured by this, as the term comprehends all that a child is to learn to fit him for his future duties and responsibilities and for the great work of life in a civilized society. The teacher should do all that a Christian parent would do in the same circumstances.

He could not tell exactly where the teacher's authority begins and that of the parent ends. The anthority of each is concurrent in part. The responsibility of the teacher should continue till the child comes under the direction of the parent. The children are to be under the care of the teacher in the streets just so far as the good of the school requires. Several cases were cited to illustrate the extent of the teacher's duty. He did not believe the teacher's authority ended at the close of the six hours. The whole matter is within the power of school committees; and as a general thing, there are no persons who use absolute power with more discretion than the school committees of Massachusetts. Mr. Parish of Springfield inquired if a teacher would have the right to punish a boy for stealing fruit from a neighbor's land while on his way from school. That is an offence punishable by law.

To that question Mr. White replied that the fact of the boys being amenable to the penalty of the law did not relieve the teacher from a concurrent responsibility so far as the offence was one affecting the character of the school. Whatever is done out of school by any pupil which tends to injure the school may be considered by the teacher. The question was further discussed by Messrs. Boltwood of Lawrence, Hammond of Groton, Walton of Lawrence, and Claflin of Malden.

Mr. Greene of Worcester did not believe the teacher had any moral or legal right to control his pupils beyond the premises of the schoolroom, though he might do a sort of missionary work in promoting the good of his pupils by reproving them, and even by keeping them after school for reproof or correction. That work, however, was only by sufferance. As such he had done it, and would continue to do it.

Mr. Hooker of Springfield said that the fixing of the hours of school rested with committees. The authority to keep scholars after school rests on the same authority. This has been so from time immemorial, and is therefore a legal right on the part of the teacher.

Mr. Bigelow, Principal of the Framingham Normal School, thought many difficulties would be avoided if the law defined precisely the extent of a teacher's authority.

UNION CONVENTION, CALIFORNIA.

We have received a report of the doings of the Union State Convention, held at Sacramento, on the 17th and 18th days of June last. The principal business was to perfect the organization of the Union party, and to nominate a candidate for Superintendent of Public Instruction. The convention was well attended, and the proceedings were harmonious. That part of the proceedings relating to the nomination of Superintendent is interesting to the educational public.

Mr. Benton of Sacramento, stated as his idea, "that the convention ought to inaugurate the policy of giving this office to the man best fitted for it, both by capacity and by profession — that was, that the candidate should be a practical teacher, and one who understood the wants of the State. He therefore nominated John Swett of San Francisco, who, for eight or nine years, had taught Rincon School, No. 1, in that city, having now about one thousand scholars and fourteen or fifteen teachers under his charge." All seemed to coincide with Mr. Benton in regard to the kind of man that ought to be selected for the office; but Mr. McNabb nominated George W. Reed, a teacher in Sonoma; and Mr. Fitch nominated Frank Soule, of San Francisco, who had taught school and had done much as a writer to educate the public taste. Two other candidates were nominated, but the three named were the leading ones.

After some discussion of the merits of the gentlemen proposed, Mr. Wilson moved that the several candidates be invited to appear upon the stand. This motion prevailed. The candidates then came forward and severally addressed the convention. A ballot was then taken, showing 126 votes for Swett, 91 for Soule, and 37 for Reed. Before the announcement of the vote, such changes were made as increased Mr. Swett's number to 139. He was subsequently declared the nominee of the convention by a unanimous vote.

We hope we shall have the pleasure of chronicling the election of the worthy Principal of the Rincon School, San Francisco, to the office for which he has been nominated; and since in the coming election he represents the Union cause, we hope his majority will be large enough to crush secession in California.

We find in this report a word new to us. Have the publishers of Worcester, or Webster taken note of it? Mr. Sherman, Chairman of the Finance Committee, suggested that the delegates who had not paid their assessment "walk up and *pungle* down." Whereupon several come forward and "*pungled.*"

TWENTY-FIFTH ANNUAL REPORT OF THE BOARD OF EDUCATION, TOGETHER WITH THE TWENTY-FIFTH ANNUAL REPORT OF THE SECRETARY OF THE BOARD. Boston, 1862.

We confess to be rather behind the times in mentioning this Report, which was published in May, so late; but better late, however, than never. The principal cause of this delay was the fact that our attention was more drawn to, and our extra efforts more demanded by, the unsettled state of our whole country, than to

and by the settled affairs of education in Massachusetts. Our schools have suffered, thus far, but little during the present rebellion. The State appropriated the accustomed sums for normal schools, teachers' meetings or institutes, and for partial support of the common schools. The cities and towns in the Commonwealth have almost throughout retained the same number of teachers at the former salaries. Only a few places, with old Dorchester among them, form an exception. The teachers have worked faithfully, and the schools have not fallen behind former years. Massachusetts has shown that she is well able to furnish her quota of leading, laboring, and fighting men ("Lehr, Naehr — and Wehr — stand.)

This Report contains the same subdivisions to which for years we have become accustomed, with the same results: "correct and satisfactory." The building of the normal school at Bridgewater has been enlarged and renovated, and all four normal schools are doing well. An interesting historical sketch is given of all the educational associations existing in the State with the lists of present officers. The new Secretary furnishes a synopsis of all educational agencies in the State; the State school fund, district school libraries, dictionaries furnished by the State, agency of the Board, normal schools, State scholarships, teachers' institutes, evening schools for adults, and closes with remarks on spelling and reading. From the summary of statistics for 1861–2 we take the following figures:

There are in the 334 towns of the State 2,607 school districts with 4,561 schools. Of 231,480 persons between 5 and 15 years of age, 212,786 went to public schools, whose mean average attendance was, expressed in decimals, .74. Among them were 10,104 children less than 5, and 24,900 persons over 15 years old. There have been employed during the summer 429 males and 4,703 female teachers; while their number during the winter was 1,498 males and 3,845 females. Average length of Public Schools, eight months. The average salary, including board, per month, was $47.71 for male, and $19.95 for female teachers. Aggregrate as expended on Public Schools alone, exclusive of expense of repairing and erecting school-houses and the cost of school books, $1,612,823. The Latin and Greek Languages are taught in 105 High Schools. There are 63 incorporated Academies, with 3,425 scholars, who paid for tuition $84,279; and 638 private schools and Academies, with about 16,400 pupils who paid $349,533 for their instruction. The Secretary says:

"I am unwilling to close this Report without an allusion to the gratification which I have experienced in finding, in every section of the Commonwealth, the most cheering manifestations of an unabated interest in our Public School system. The fierce trials through which our institutions are now passing, have turned the public mind with an unwonted interest to the primal sources and springs of our social and national life, and thus have brought out into a clear and bolder view the vital relations of our free schools to public weal; and never have they found a higher place in the popular regard, than now. Happy, indeed, will be the augury for the future, if the records of our towns and cities, burdened as they will be by an unprecedented taxation, shall show that they have withheld from the support of these schools, no part of that support with which they have been hitherto so generously sustained."

The Abstracts of School Committees' Reports have evidently been made with much care; but we are sorry to be forced to the belief, that they are read but very little. They contain many excellent thoughts which might be useful to teachers

and parents. Unfortunately, however, these thoughts are arranged under local headings, and therefore offered promiscuously. Consequently some topics are dwelt upon very extensively or during a series of years, while others, just as important, are only briefly alluded to or not touched at all for a considerable space of time. An index of the topics introduced, would prove a valuable addition.

INTELLIGENCE.

PERSONAL.

Wm. J. Rolfe, of the Salem High School, has been elected Principal of the High School, Cambridge.

E. Frank Wood, of Milton, has been elected Principal of the Mather School, Dorchester.

Richard Edwards, formerly Principal of the Salem Normal School, has been elected Principal of the Normal University, Bloomington, Ill. Among his assistants, we notice *Edwin C. Hewett* and *Thomas Metcalf*. The former was a short time ago a teacher in Worcester, and the latter taught for some years in West Roxbury. All three are graduates of the Bridgewater Normal School, and we are glad to learn that they are working together in a kindred institution in the West.

QUESTIONS PROPOSED AT BUNKER HILL SCHOOL, CHARLESTOWN, JULY, 1862.

1. What must be the length of a board that is $8\frac{3}{8}$ inches wide to contain one square foot?

2. Suppose a hall to be 154 feet long and 55 feet wide; what is the length of the longest pole that will exactly measure both the length and width of the hall?

3. Reduce $\frac{5}{6}$ to a fraction whose denominator shall be 14.

4. What are the two fractions whose sum is $\frac{4}{5}\frac{3}{0}$, and whose difference is $\frac{6}{2\,7}$?

5. A man has wine worth $87\frac{1}{2}$ cents per gallon; how much water must be added to make it worth 75 cents per gallon?

6. What is the interest on $149.74 from April 22nd, 1861 to March 1st, 1862, at 7 per cent?

7. What is the amount of a note due one year hence which being discounted at a bank will net me $1000?

8. What sum of money will amount to $336 42 in 1 year 4 months at 6 per cent?

9. What is the interest of £41 9s. 9d. for 1 year 7 months 15 days at 6 per cent?

10. A man borrowed $1000 for 30 days. For 25 days he paid interest at the rate of 4 per cent.; for the remaining 5 days at the rate of 6 per cent. How much interest did he pay and what was the rate for the 30 days? (The exact fractions must be used.)

11. A note for $1500 dated Dec. 5th, 1861, for 90 days was discounted at a bank Jan. 16th, 1862. What sum was received?

12. If eggs be bought at the rate of 5 for 4 cents, how must they be sold per dozen to gain 25 per cent?

13. A man sold goods for $40 and lost 10 per cent., for how much should he have sold them to gain 15 per cent.?

14. It is required to lay out 20 acres of land in the form of a right-angled parallelogram, which shall be twice as long as it is wide. What will be its length and breadth?

15. The diameter of a given circle is 11 inches; what is the diameter of a circle containing 9 times as much space?

16. Find the side of a square equal in area to a circle of 20 rods in diameter.

17. A certain cubical stone contains 389.017 solid feet. What are the superficial contents of one side?

18. A grocer has two sorts of tea; one at 75 cents a pound, and the other at $1.10 a pound. In what proportion must he mix them in order to afford the mixture at $1 a pound?

19. Suppose a rope 10 rods long, to have one end attached to a horse's head, and the other end fastened to a stake in the centre of a field; how much land will the horse be allowed to graze upon?

20. What must be the depth of a cistern to hold 850 gallons? Diameter being 6 feet.

VERBAL STATISTICS. — The annexed suggestion is made by a Nottingham journal: "Professor Max Muller, in his admirable lectures on the Science of Language (call it, if you will, Glossology or Logology,) tells us that out of the 50,000 words or so in the English tongue, it has been found that a rustic laborer only used 300. An ordinary educated man is supposed to use 3000 or 4000, while a great orator reaches 10,000. The Old Testament contains 5642 different words; and the works of Shakspeare about 15,000; those of Milton about 8000."

BOOK NOTICES.

THE NEW GYMNASTICS FOR MEN, WOMEN, AND CHILDREN. With a Translation of Prof. Kloss's Dumb-bell Instructor and Prof. Schreber's Pangymnastikon. By DIO LEWIS, M. D., Proprietor of the Essex Street Gymnasium, Boston. With three hundred Illustrations. Boston: Ticknor & Fields. 1862.

The noble work which Dr. Lewis has done in behalf of physical education is well known to American educators. It is not too much to say that to him more than to any other man must be attributed the deep *practical* interest now manifested by educators throughout the country, in reference to the proper culture of the human body. For many years distinguished professional gentlemen had discoursed on the importance of physical training, but when teachers, freely admitting the need of such training, said, "Tell us *just what we can do* in the schoolroom towards accomplishing the desired end," no one was able to give a distinct and satisfactory answer. Two years ago, at the meeting of the American Institute of Instruction in Boston, Dr. Lewis described and practically illustrated his methods of physical culture. We need not refer to the enthusiasm with which these methods were received. All present seemed to unite in exclaiming, "Here, at last, is something practicable. These things we can learn to do, and teach our children to do." The influence of Dr. Lewis's arguments and visible proofs was soon felt far and wide. Prominent educators returned from the Institute, and at once began to put into practice what they had learned. And now in many of the large cities and towns of our country the methods presented by Dr. Lewis, — modified, in some cases, to conform to local circumstances — are in successful use.

For the instruction of those who are not already acquainted with his methods, the Doctor has published a book on gymnastics which is plain and comprehensive. It clearly describes many movements which can be made either with or without the simple and cheap apparatus recommended, and which are therefore adapted for use in schools; and it also describes a large number of exercises which are admirably fitted for use at home. Every teacher and every parent who cares for the physical welfare of the children entrusted to him will surely obtain a copy of this most valuable work, and will thank the author for the good words he has written. The book is a capital one and ought to find its way into every house in the whole country.

NEW UNIVERSITY ALGEBRA: A Theoretical and Practical Treatise, containing many new and original Methods and Applications. For Colleges and High Schools. By HORATIO N. ROBINSON, LL. D., late Professor of Mathematics in the United States Navy, and Author of a full course of Mathematics. New York: Ivison, Phinney & Co.

We have derived much pleasure from an examination of this work. The principles of Algebra are herein concisely and clearly demonstrated and illustrated. The collection of examples for practice is among the best we have seen. The author's effort "to combine the *best practical* with the *highest theoretical* character" seems to have been remarkably successful. The work is beautifully printed and strongly bound. Teachers who wish to keep fully posted in Algebra will not fail to give it an examination.

THE GRADED SCHOOL. By WM. H. WELLS, A. M. A. S. Barnes & Burr, New York.

The name of the author is a sufficient guarantee of the value of this work. He defines a *graded school* to be one "in which the pupils are divided into classes according to their attainments, and in which all the pupils of each class attend to the same branches of study at the same time." The common methods of grading are here given and a course of instruction adapted to each grade. Much excellent advice in regard to methods of teaching, discipline, school records, etc., is also given. We know no work of its size that contains so much which is really valuable. Teachers, and those having the superintendence of schools, will find it of great service.

AN ENGLISH GRAMMAR. By G. P. QUACKENBOS, A. M. D. Appleton & Co., New York.

We have looked over this work with some care and, also, with some pleasure. The etymological part is excellent. The definitions are concise, and yet simple; the examples are abundant and just the ones wanted. As far as parsing is concerned we know of no book we should prefer to put into the scholar's hand. In regard to analysis, we are glad to see that the author does not multiply terms and enter into distinctions too nice for scholars to appreciate; but we think a few more pages devoted to this subject, giving the analysis of simple sentences and proceeding gradually to the complex exercises given in the book, would be an improvement. This Grammar is worthy the attention of committees and teachers.

INTELLECTUAL ARITHMETIC: being an Analysis of the Science of Numbers, with special reference to Mental Training and Development. By CHARLES DAVIES, LL. D. A. S. Barnes & Burr, New York.

The Primary Arithmetic of this series, by Prof. Davies, was noticed a short time ago. This is the next in course, and proceeds upon the same principle, that of keeping the elementary idea, or *unit*, constantly in mind. Of the utility of this there can be no doubt. The arrangement of the book can hardly be improved; the forms of analysis are generally as good as can be devised, though in some instances we should like to change them a little; the examples are sufficiently numerous and are well-chosen. We always feel like thanking the publisher when we see a school-book with an open, attractive page like this.

CAUSES AND CURE OF DISEASES OF THE FEET. By C. H. CLEAVELAND, M. D. Printed by Bradley & Webb, Cincinnati.

Whatever relates to the *understanding* is in our line. We are therefore happy to receive and to call the attention of our readers to the work named above. In these days of "*Forward! March!*" the feet have an important part to perform. Our author treats well of nearly every disease to which they are subject; but the one of turning *from* the enemy instead of *towards* him he leaves untouched. Corns, hard and soft, bunions, in-growing nails, chilblains, blisters, weak ankles, carbuncles, gout, distortions, etc. etc., and their treatment are described. Directions in regard to the general management of the feet, their clothing, shape of the shoe, etc., are given. The author manifests a thorough acquaintance with his subject, and a thorough acquaintance with his book would be of much use to suffering humanity.

PHOTOGRAPHIC ALBUMS. — We take pleasure in calling the attention of teachers to the advertisement of SAMUEL BOWLES & CO. Their Albums are not excelled.

August, 1862.

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NOW HAVE READY,

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THIS new school book, by the well-known and popular author of works on Composition and Rhetoric, presents many peculiar and invaluable improvements both in the treatment and in the arrangement of the subject matter.

DEFINITIONS are approached by means of preliminary illustration, which makes their abstract language intelligible, while it is in process of learning.

WORDS are classified under the parts of speech entirely and exclusively, according to their *use*. All such inconsistencies as "adjectives used as nouns," "adverbs used as adjectives," "transitive verbs used intransitively," etc., are avoided. A word used as a noun is called a noun, a verb used intransitively is called an intransitive verb, etc. This simple and natural course does away with all *arbitrary* classification of words, and enables every pupil to classify them readily and correctly for himself.

THE RULES OF SYNTAX are not left till the end of the book, but are introduced as they are needed, in connection with etymological parsing. Thus is avoided the absurdity (inevitable in all books that keep back the Rules of Syntax) of requiring a pupil to give the case of nouns in instances in which he can have no possible clue to it.

THE MATTER is divided into Lessons of convenient length, followed, in every case, by a practical Exercise, which immediately applies, in every variety of way, the principles just learned. This gives an opportunity for a great amount of Exercise — of lively interest to the pupil, and direct practical utility — not only in parsing and false syntax, but also, under etymology, on the forms of words, etc.

A BRIEF and rational method of analyzing sentences is presented, not encumbered by technical terms, not perplexing to the teacher, or requiring labor on his part to make it available.

DIFFICULTIES are boldly met and clearly dealt with. There is no non-committalism. A Lesson is expressly devoted to the explanation of perplexing constructions.

In minor particulars, it is claimed that this book will be found to contain many improvements. All these cannot be specified here. Suffice it to say that it is believed to possess superior merit, especially in its drawing clear lines for distinguishing the several parts of speech; in its ignoring the neuter gender, an absurdity engrafted on English Grammar from the classical languages; in its treatment of the comparison of adjectives; in its lucid and comprehensive exposition of auxiliaries and practical directions and Exercises for teaching their proper use; in its introduction of *need* as an auxiliary of the present potential; and in its peculiar terseness and perspicuity of style. The book aims, to *educate*, in the true sense of that word — to *draw out* the pupils powers of thought — to make his mastery of language intelligent and not mechanical, and to render Grammar as attractive a study as it has heretofore been repulsive.

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Sept. '62.

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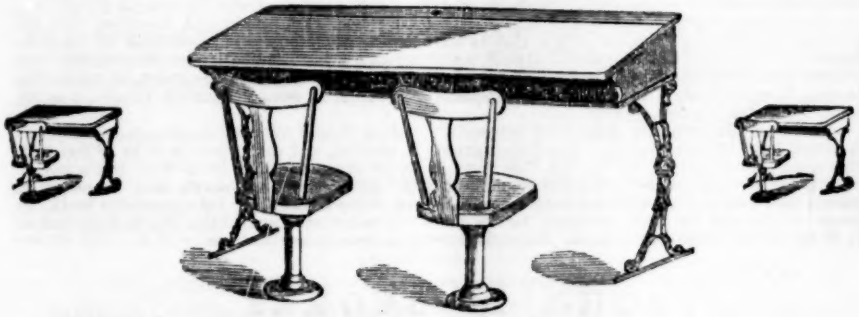

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